

NOTEBOOKS

FAQ

Q Can I connect my notebook to a standard CRT TV and use it to display DVDs and video files?

A Most notebooks have either an S-video output or TV-out for this purpose. An S-video output can be connected to the S-video input on your TV. If you don't have one you'll have to use a composite converter and connect it to a composite input.

A TV-out can carry component, S-video and composite signals, in order of quality. You should have been provided with a breakout cable to connect the appropriate leads to. Remember you'll need to connect your notebook's audio output to the TV's phono inputs to get sound. If your TV only has SCART inputs, you'll need a suitable converter cable.

Next you'll need to activate the TV output by using a keyboard shortcut. This is usually done by holding down the function key and pressing F4 or F5 until you can see the Windows desktop on your TV. Check your notebook's manual for more details.

Seth Barton

Notebooks and video expert



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ACER

TravelMate 8215WLMi Br

★★

£1,689 inc VAT

Acer's TravelMate 8215WLMi Br is the first notebook we've reviewed to have a built-in Blu-ray drive. With the number of Blu-ray movies rapidly increasing, this is now more than just a novelty.

Surprisingly, the 8215WLMi is based around one of Acer's portable Travelmate designs, rather than an entertainment notebook from its Aspire range. The display is a standard 15.4in; we would have preferred a 17in screen for watching Blu-ray movies.

The display's native resolution is 1,680x1,050 pixels, which doesn't quite match the 1,920x1,080 resolution of Blu-ray movies. However, the supplied CyberLink PowerDVD software does a good job of downscaling the video to fit and the results look excellent, with the small screen bursting with picture detail. Unfortunately, the display isn't very bright and doesn't have a gloss finish to enhance blacks and colour vibrancy. You can use the DVI or VGA outputs and watch Blu-ray movies on an external HD display, but the lack of an HDMI output is disappointing.

The ability to watch Blu-ray movies on the move makes this notebook potentially the ultimate in portable media players. However, Blu-ray playback is a demanding process. Our first attempt to watch a movie while disconnected from the mains resulted in a jerky frame rate. We had to override the graphics card's power-saving mode to get everything running smoothly. A quick test showed that a full battery gives only one hour and 17 minutes of Blu-ray playback, so you won't see the end of even the shortest movies. In comparison, the battery lasted for two and a-half hours when playing a standard DVD.



The 8215WLMi managed a respectable three hours and 44 minutes in our light usage battery test, so is perfect for occasional use. Its fast T7200 processor and 2GB of RAM made short work of our benchmarks, too. The ATI Radeon X1600 graphics chipset is essential for accelerating Blu-ray playback, but will also run modern games smoothly at reduced detail settings.

The notebook is sturdily constructed, and there are plenty of ports for peripherals. The speakers are nothing special, so you'll need to use headphones or external speakers to get the most from movies. A coaxial minijack

S/PDIF is provided for hooking up a surround-sound amplifier.

There's no denying that the TravelMate 8215WLMi Br is a powerful notebook, capable of handling any task you throw at it. Its excellent high-resolution screen makes the notebook even more desirable. Sadly, the poor battery life for Blu-ray playback and the incredibly high price make it impossible to recommend. PC Nextday's Zoostorm 53-7701 Family Laptop (see 'Also Consider...', below) has similar specifications and performance but costs almost half as much.

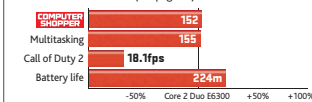
Seth Barton

SUMMARY

- ✓ Blu-ray drive
- ✓ Well built and portable
- ✗ Expensive

NOTEBOOK PC 2.0GHz Intel Core Duo T7200, 2GB RAM, 160GB hard disk, ATI Radeon Mobility X1600 graphics, DVD+/-RW +/-DL Blu-ray drive, 15.4in LCD widescreen, weighs 3.0kg
PART CODE LX.TEG06.034
SUPPLIER www.laptopsdirect.co.uk
DETAILS www.acer.co.uk

PERFORMANCE (see page 58)



Also consider...

PC NEXTDAY

Zoostorm 53-7701 Family Laptop

★★★★★

£881 inc VAT



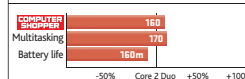
This desktop replacement notebook has an impressive specification for work, and some great entertainment features, too. There's a built-in hybrid TV tuner so you can receive analogue or digital broadcasts. Using Windows Media Center, you can schedule recordings and store them on the big 160GB hard disk. There's also a decent 3D graphics chipset so you can play games.

The 17in widescreen display is fine for most purposes, but there is a light graininess across the surface that detracts from fine detail. It has a 1,440x900-pixel native resolution, giving you plenty of space to work with. The big screen also means there's space for a number pad alongside the keyboard.

Inside, there's a fast processor and 2GB of RAM. This notebook can take on the most demanding



NOTEBOOK PC 2GHz Intel Core 2 Duo T7200, 2GB RAM, 160GB hard disk, ATI Radeon Mobility X1600 graphics, DVD+/-RW +/-DL, 17in widescreen LCD, 3.6kg
SUPPLIER sales@pcnextday.co.uk
DETAILS www.pcnextday.co.uk
PART CODE 3353-7701
✓ Fast in applications; plenty of ports ✗ Grainy display
FULL REVIEW May 2007



tasks such as video editing and won't need upgrading for some time to come. Even the battery life is impressive for a notebook of this size. This is a great choice if you want lots of features and computing power for the lowest possible price.

SAMSUNG R70

★★★★★

£685 inc VAT



Samsung's R70 looks very similar to the R20 we reviewed last month. It's black all over with a shiny black lid, which helps it stand out from the mass of silver and grey models. It's also the first notebook we've seen based on Santa Rosa, the latest version of Centrino (see the box, right, for more details).

The R70's Intel Core 2 Duo T7100 processor runs at a respectable 1.8GHz. As a Santa Rosa notebook, the R70 also has an 800MHz front side bus. However, this didn't have much impact in our benchmarks. It performed similarly to older notebooks using 1.83GHz Intel Core 2 Duo T5600 processors with a front side bus of 667MHz. Even so, for a notebook of this price, the R70's performance was excellent.

It may have a new processor and an Intel Mobile 965 chipset, but the R70 doesn't use any of the more exciting parts of the Santa Rosa platform. There's no Draft-N wireless card, no flash memory cache, and it doesn't use the new Intel GMA X3100 graphics chipset.

Instead Samsung has opted for the new DirectX 10-compatible Nvidia GeForce 8400M GS. Sadly, it managed only 10.8fps in our Call of Duty 2 benchmark, and we had trouble getting anti-aliasing to work properly. A driver update should fix that problem and see a small increase in performance. It will play current releases at low detail settings, though, which is impressive at this price.

The R70's slender 2.7kg chassis makes it fairly easy to transport. The battery lasted for a respectable three hours and 19 minutes, good enough for occasional mobile use. The chassis flexes a little under



pressure, so you should invest in a laptop bag with good shock protection.

The 15.4in display has a native resolution of 1,280x800 pixels. It performed brilliantly in our tests. Whites are free of any coloured tint and there's even backlighting. The gloss finish improves the vibrancy of colours, and there's no visible graininess. It's a great display and one we'd be happy to use every day.

The R70's two input devices are both excellent. The keyboard has good resistance to key presses, but still provides plenty of feedback. This makes typing precise, without being tiring. The touch pad also works well and the buttons are responsive.

Disappointingly, there are only two USB2 ports, so gadget fans will probably need to invest in a USB2 hub. There's HDMI for connecting the notebook to an external monitor, and a memory card reader is also fitted, with support for MS, SD and xD formats. The big 160GB hard disk should provide enough space to store a lot of photos or other media files.

The R70 is an excellent notebook. It's quick in applications, has a good display and excellent input devices.

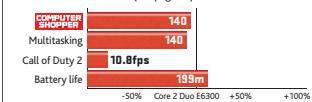
Seth Barton

SUMMARY

- ✓ Great display
- ✓ Excellent input devices
- ✗ Only two USB2 ports

NOTEBOOK PC 1.8GHz Intel Core Duo T7100, 1GB RAM, 160GB hard disk, Nvidia GeForce 8400M GS graphics, DVD+/-RW +/-DL drive, 15.4in LCD widescreen, weighs 2.7kg
PART CODE NP-R70A003/SUK
SUPPLIER www.laptopsdirect.co.uk
DETAILS www.samsung.com/uk

PERFORMANCE (see page 58)



Santa Rosa

Intel has released its fourth-generation Centrino platform, codenamed Santa Rosa. It will be known as Centrino Duo for home computers and Centrino Pro for businesses when Intel's vPro management technology is included.

Santa Rosa introduces processors with an 800MHz front side bus (FSB), which gives more system bandwidth. The new processors need a new processor socket called Socket P, which is incompatible with older mobile processors. The new processors can also reduce their FSB speed when idle, and adjust each core's speed individually to help increase battery life. There's not a big increase in performance over the older generation, as our Samsung R70 review shows.

Santa Rosa also introduces a new chipset: Mobile 965 Express. This includes Intel's GMA X3100 graphics, which has support for Vista's Aero interface, but not currently DirectX 10. The chipset supports faster memory up to 667MHz DDR2.

Santa Rosa has support for – but doesn't require – 802.11n networking. The current adaptors are based on the current draft, so it's anyone's guess as to how compatible this will be when the standard is finally passed.

Intel's original plans for this platform were to include wireless WAN using HSDPA and WiMAX, which provides high-speed fixed wireless networking. HSDPA support looks unlikely ever to be included, but WiMAX should be part of the next generation of Centrino.

Finally, there's support for Turbo Memory: a flash-based hard disk cache, which can speed performance and application-loading times when used with Windows Vista. There's no requirement for Turbo Memory, either, though.

Santa Rosa isn't quite the exciting jump forwards that we'd expected, and not all notebooks that use it will have the full array of features. The differences aren't enough to justify buying one of these notebooks, and we'd recommend that you still look at the older generation of Centrino notebooks, too.

ACER Aspire 5101AWLMi

★★★★★

£400 inc VAT

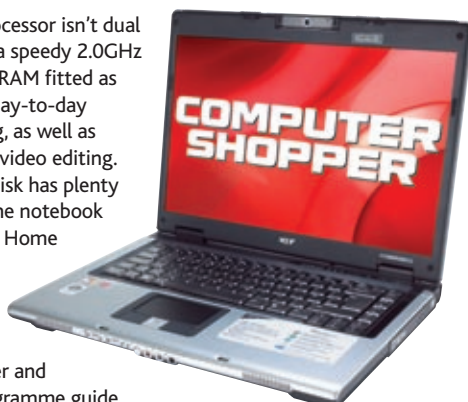
PRICE CUT!



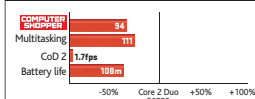
This notebook's processor isn't dual core, but it runs at a speedy 2.0GHz and there's 1GB of RAM fitted as well. It's easily capable of day-to-day tasks such as web browsing, as well as straightforward photo and video editing.

The large 120GB hard disk has plenty of space for big files, and the notebook comes with Windows Vista Home Premium installed. This includes Windows Media Center, so you can browse your media files with ease, or add a TV tuner and use the free electronic programme guide. There's also a DVD writer for making backups and burning home movies.

You'll be able to enjoy photos and videos to the full thanks to the excellent widescreen display. It's bright



NOTEBOOK PC 2.0GHz AMD Turion 64 MK-36, 1GB RAM, 120GB hard disk, ATI Radeon Xpress 1100 graphics, DVD+/-RW +/-DL drive, 15.4in LCD widescreen, 2.7kg
SUPPLIER www.dabs.com
DETAILS www.acer.co.uk
PART CODE LX.AX90X.017
✓ Fast for a budget notebook; DVD writer; big hard disk ✗ Poor battery life FULL REVIEW Jul 2007



and has good contrast, plus there's a built-in webcam for video chat sessions. This is a great budget notebook at an excellent price.

BYTE SIZE

SANDBERG FM Link

★★
£18 inc VAT



Sandberg's FM Link is an FM transmitter for MP3 players. It connects to a headphone output and broadcasts the audio to a radio using FM. It can be powered either by the bundled car-charger or through two AAA batteries.

Sound quality was on a par with other transmitters we've reviewed, but the FM Link is less flexible in letting you choose the broadcast frequency. There are four hard-wired presets: 106.7, 107.1, 107.5 and 107.9. One of these should be fine in most areas, but we prefer the flexibility of being able to choose any frequency.

This could be forgiven if the FM Link was cheap, but Belkin's better TuneCast II, which has an LCD for frequency selection, costs the same from www.dabs.com.

David Ludlow

SUPPLIER www.sandbergdirect.com
DETAILS www.sandberg.com

SONY MRW62E

★★★★
£19 inc VAT



Sony's MRW62E is a 17-in-1 memory card reader. Nine of these formats, including Memory Stick, Memory Stick PRO and Memory Stick Micro M2, are Sony formats, but there's also support for other formats. These include all the common card formats, such as SD and CompactFlash, but also some of the rarer types, including xD and mini SD.

The MRW62E connects via USB. Considering the number of cards it supports, it's surprisingly small and takes up less room than a deck of cards. It also looks quite neat, and its silver finish means it would look good on any desk.

Cheaper, larger card readers from other manufacturers are available, but for its small size and neat looks, the MRW62E is good value.

David Ludlow

SUPPLIER www.it247.com
DETAILS www.sony.co.uk

MEDION MD96327

★★★★★
£499 inc VAT

Not content with selling cornflakes and baked beans, supermarkets now also stock an amazing array of non-food products as well. So we shouldn't be too surprised that Medion is distributing its MD96327 desktop replacement notebook exclusively through Sainsbury's stores from the end of July.

Budget notebooks sell well at this time of year, with the new school year approaching and many students looking for a new computer. And at just under £500 you get quite a lot for your money.

It's a big notebook with a 17in display, and it weighs in at a hefty 3.6kg. It's not suitable for everyday mobile use, but it's a lot more portable than a desktop PC should you wish to bring it home at the end of term. The battery lasted just over two hours, so you won't want to be far from a mains socket, either.

The display supports a native resolution of 1,440x900 pixels. Image quality is good, with bright whites and vibrant colours. It did an acceptable job of our more demanding technical tests, so accurate photo work is possible.

The display's size and widescreen dimensions make it ideal for watching DVDs. You could also add a USB TV tuner and use it as a TV and video recorder, with the big 160GB hard disk providing plenty of recording space.

The chassis is pretty unattractive, particularly the textured black plastic strip between the display and the keyboard. The keyboard has a number pad beside it, which is useful if you enter a lot of figures. The keys at either end of the keyboard feel fine, although they lack resistance a little. In the middle, however, the keyboard



flexes when you type, slapping against the chassis below. This makes an irritating noise, and is likely to annoy those with long documents to type.

The basic but acceptable selection of ports includes four USB2 ports. A standard TV-out is available should you want to watch DVDs on a TV. The only luxury is an optical mini-jack S/PDIF, so you can hook the notebook up to a surround-sound amplifier. Sadly, there's no memory card reader for uploading your pictures.

The dual-core 1.6GHz AMD Turion 64 X2 TL-50 processor isn't bad, but we've found that Intel Core 2 Duo processors running at the same clock speed do better in our tests. The MD96327 has a healthy 2GB of RAM, though, so running memory-hungry applications such as video-editing programs shouldn't be a problem. In our benchmarks it put in a respectable performance, but there are faster notebooks available even at this price.

The low price and large, high-quality display are attractive, but the poor keyboard prevents this notebook from gaining a higher score. Next month we're reviewing six notebooks at this price in our back-to-school Labs test.

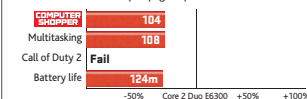
Seth Barton

SUMMARY

- ✓ Good display
- ✓ Low price
- ✗ Poor keyboard

NOTEBOOK PC 1.6GHz AMD Turion 64 X2 TL-50, 2GB RAM, 160GB hard disk, ATI Radeon Mobility Xpress 1100 graphics, DVD+/-RW +/-DL drive, 17in LCD widescreen, weighs 3.6kg
PART CODE MSN 30006800
SUPPLIER Sainsbury's 0800 636262
DETAILS www.medion.co.uk

PERFORMANCE (see page 58)



Also consider...

LENOVO ThinkPad X60s

★★★★★
£1,178 inc VAT



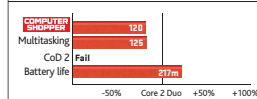
This ThinkPad's black chassis is light, slender and looks business-like. Despite being small and slim, though, it's very sturdy and should take a few knocks. The display has an anti-glare finish so you can work in most lighting conditions. Lenovo has included a built-in a 3G data card for fast mobile internet; however, you will need a monthly contract from a network provider.

It did surprisingly well in our benchmarks despite its low-voltage processor, and the small battery lasted for half a working day in our light usage test. If you need a longer battery life then Lenovo has a range of larger alternatives.



ULTRA-PORTABLE NOTEBOOK

Intel Core Duo L2400, 1GB RAM, 80GB disk, Intel Graphics Media Accelerator 950 graphics, no optical drive, 12.1in LCD, 1.3kg
SUPPLIER www.laptopsdirect.co.uk
DETAILS www.lenovo.co.uk
PART CODE UK16DUK
✓ Lightweight; built-in 3G ✗ No optical drive FULL REVIEW Jul 2007



The keyboard is great for typing documents on the move, and there's a fingerprint reader for security. If you need an ultra-portable notebook for office work, this is the best choice.

BYTE SIZE

MICROSOFT LifeChat ZX-6000

★★★★★
£29 inc VAT



The LifeChat ZX-6000 is a rebranded Xbox 360 Wireless Headset. It's designed for use with Windows Messenger for voice chat and making VoIP calls. It will, however, work with any messaging software.

The ZX-6000 connects to your PC using the supplied USB Xbox 360 Wireless Receiver for Windows. This is great for those who don't have Bluetooth, but means notebook users will have it dangling from a USB port.

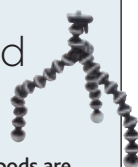
It's easy to set up and get running. The headset itself is lightweight, despite a claimed battery life of eight hours. Sound quality was acceptable, although the microphone picked up some background noise. It's a good product, and especially useful if you've got an Xbox 360 as well.

Seth Barton

SUPPLIER www.ebuyer.com
DETAILS www.microsoft.com

JOBY Gorillapod

★★★★★
£15 inc VAT



BEST BUY Camera tripods are great for taking pictures when the light is fading, or when you want to use the timer facility and get in the frame yourself. Carrying a bulky tripod around can be a hassle, though.

The Gorillapod is a great alternative to traditional tripods. It weighs 45g and is about 150mm long. The flexible legs can be bent into any position, so it works on uneven surfaces. You can also wrap the legs around a fence or tree. There's a standard screw-in tripod fitting, with a quick release so you can detach your camera quickly.

It's well-designed product, perfect for the keen photographer. This version will support cameras up to 275g, but bigger models are available for SLR owners, too.

Seth Barton

SUPPLIER www.firebox.com
DETAILS www.joby.com

CHOOSING A... Notebook Computer

Follow the steps to find your ideal specs

PROCESSOR: 1.6GHz Intel Celeron M 420
MEMORY: 512MB DDR
HARD DISK: 60GB
STORAGE: DVD rewriter
GRAPHICS: Integrated (shares system memory)
SCREEN: 15.4in widescreen 1,280x800 LCD
EXTRAS: Wireless networking
CONNECTORS: Three USB2, memory card reader
SOFTWARE: Windows Vista Home Premium
WEIGHT: 3kg
Recommended minimum in grey

1 The minimum specification of notebook we recommend, shown above in grey, is a good starting point when working out your ideal system. This is an average notebook that should cost around £600. It is not particularly powerful or, at 3kg, particularly portable.

2 Dual-core processors, such as Intel's Core 2 Duo range, can be much faster at many tough tasks. This is dependent on software support, but a lot of applications have now been optimised. Dual-core processors are widely available and often cost only a little more than their single-core equivalents.

3 Most notebooks come with 15.4in 1,280x800 widescreen displays, which are great for watching DVDs or TV. If you want a notebook for use around the home, especially for entertainment purposes, it's worth considering one with a larger 17in display. This will also have a higher native resolution of at least 1,440x900, giving you a bigger desktop. This makes it far easier to use complex applications, such as photo- or video-editing software.

4 A modem, 10/100 Ethernet port and wireless 802.11b/g networking (WiFi) should be fitted as standard, but there are also some other ports and connectors that you might want. FireWire (IEEE 1394) is common and useful for digital video enthusiasts. Bluetooth is handy for connecting to a mobile phone, but it's usually fitted only to more expensive business notebooks. Memory card readers are pretty much standard, but check that your camera or MP3 player's format is supported.

5 If portability is your main priority, look for a notebook with a 12.1in display.

Spending around £1,000 will get you an ultra-portable notebook that weighs under 2kg. Most of these notebooks are just as powerful as their larger counterparts, though some use slower, ultra-low voltage (ULV) processors to further increase battery life.

6 Some ultra-portables can attach to an optional docking station, which incorporates drives, ports and power, when you get home to your desk. It's the best of both worlds, but tends to be expensive. Others have separate DVD drives, or no optical drive at all, to help keep size and weight to a minimum.

7 If you're not swayed by ultra-portable chic, you can get a lot more for your money. Entertainment notebooks pile on the features but still keep the price under £1,200. You should expect a 17in widescreen display, hybrid TV tuner and a remote control.

8 There are features you can add to a notebook without increasing the weight or reducing battery life. A 120GB or 160GB hard disk will give you much more storage space, while 1GB of RAM will help you speed through tougher tasks. DVD rewriter drives are standard and will allow you to burn CDs and DVDs on your notebook.

9 Dedicated graphics let you play modern 3D games and are increasingly common on all but the cheapest or lightest notebooks. Look for an ATI Radeon Mobility X1600 or Nvidia GeForce Go 7600 chip as a minimum for getting smooth frame rates on the latest titles. Many notebooks use integrated graphics, which are fine for all other purposes, but use up system memory.

10 Once you're happy with your specification, start to shortlist some models you can afford. Check the weight, display size and battery life of each of them. If these are not acceptable, you need to reconsider your priorities and which features you really need.

